

**CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS:**

1. **(Currently Amended)** Carrier comprised of a core, and a polymer coating, and  
\_\_\_\_\_ wherein said coating contains a conductive polymer~~polypyrrole~~ contained in a carbon black matrix, ~~or a polyaniline contained in a carbon black matrix, and~~  
\_\_\_\_\_ wherein said conductive polymer~~polypyrrole~~ is formed by the in situ polymerization of said conductive polymer~~polypyrrole~~ onto said carbon black matrix, ~~and wherein said polyaniline is formed by the in situ polymerization of said polyaniline onto said carbon black matrix, and~~  
\_\_\_\_\_ wherein said conductive polymer is selected from the group consisting of polypyrrole and polyaniline;  
\_\_\_\_\_ and wherein said polypyrrole~~conductive polymer~~ is present in an amount of from about 0.1 to below about 5 percent by weight of said polymer coating, ~~and wherein said polyaniline is present in an amount of from about 0.1 to about 5 percent by weight of said polymer coating.~~
2. **(Original)** A carrier in accordance with **claim 1** wherein the polymer coating is comprised of a mixture of polymers.
3. **(Original)** A carrier in accordance with **claim 2** wherein the mixture is comprised of two polymers.
4. **(Original)** A carrier in accordance with **claim 2** wherein the mixture is comprised of two polymers not in close proximity in the triboelectric series.
5. **(Original)** A carrier in accordance with **claim 2** wherein the mixture is comprised of from about 2 polymers to about 7 polymers.

6. **(Original)** A carrier in accordance with **claim 1** wherein the conductive polymer is a polypyrrole coated on carbon black.

7. **(Original)** A carrier in accordance with **claim 6** wherein the polymer possesses a weight average molecular weight  $M_w$  of from about 10,000 to about 400,000, or possesses a weight average molecular weight of from about 20,000 to about 100,000.

8. **(Original)** A carrier in accordance with **claim 6** wherein said polymer possesses an  $M_w$  of from about 22,000 to about 75,000, and an  $M_w/M_n$  ratio of from about 1.4 to about 2.

9. **(Cancelled).**

10. **(Original)** A carrier in accordance with **claim 1** wherein the ratio of said polypyrrole carbon black to said polymer coating is from about 1/99 to about 5/95.

11. **(Original)** A carrier in accordance with **claim 1** wherein the ratio of said polypyrrole carbon black to said polymer coating is from about 2/98 to about 10/90.

12. **(Original)** A carrier in accordance with **claim 1** wherein the ratio of said polypyrrole carbon black to said polymer coating is about 5/95.

13. **(Original)** A carrier in accordance with **claim 1** wherein said core diameter is from about 30 to about 100 microns.

14. **(Original)** A carrier in accordance with **claim 1** wherein said core is iron, steel or a ferrite.

15. **(Original)** A carrier in accordance with **claim 1** wherein said coating polymer is a styrene polymer.

16. **(Previously Presented)** A carrier in accordance with **claim 1** wherein said polymer coating is polyvinylidene fluoride, polyethylene, polymethyl methacrylate, polytrifluoroethylmethacrylate, copolyethylene vinylacetate, copolyvinylidene fluoride, polytetrafluoroethylene, polystyrene, polyvinyl chloride, polyvinyl acetate, or mixtures thereof.

17. **(Original)** A carrier in accordance with **claim 1** wherein said polymer coating is polymethylmethacrylate, polystyrene, polytrifluoroethyl methacrylate, or mixtures thereof.

18. **(Original)** A carrier in accordance with **claim 1** wherein said polymer coating is comprised of a mixture of polymethylmethacrylate and polytrifluoroethyl methacrylate.

19. **(Original)** A carrier in accordance with **claim 1** wherein said polymer coating is present in an amount of from about 0.5 to about 10 percent by weight of said carrier, or from about 1 to about 5 percent by weight of said carrier.

20. **(Original)** A carrier in accordance with **claim 2** with a conductivity of from about  $10^{-15}$  to about  $10^{-4}$  (ohm-cm)<sup>-1</sup>.

21. **(Original)** A carrier in accordance with **claim 2** with a triboelectric charge value of from about -60 to about 60 microcoulombs/gram and a conductivity of from about  $10^{-12}$  to about  $10^{-6}$  (ohm-cm)<sup>-1</sup>.

22. **(Cancelled).**

23. **(Original)** A developer comprised of the carrier of **claim 1** and toner.

24. **(Original)** A developer in accordance with **claim 23** wherein said toner is comprised of a thermoplastic resin, colorant, and optionally toner additives, and optionally wherein said additives are charge additives, wax, surface additives and mixtures thereof.

25. **(Original)** A carrier in accordance with **claim 1** wherein said coating contains therein or thereon a polymer of polyaniline segments attached to Lignin.

26. **(Original)** A carrier in accordance with **claim 1** wherein said coating contains therein or thereon a mixture of a conductive polypyrrole and carbon black; or a mixture of a polyaniline and carbon black matrix.

27. **(Currently Amended)** Carrier comprised of a core, a polymer coating, and wherein said coating contains a mixture of a polypyrrole and carbon black particles, and wherein said polypyrrole mixture is formed by the in situ polymerization of said pyrrole polypyrrole on the surface of said carbon black particles, and wherein said polypyrrole is present in an amount of from about 0.1 to below about 5 percent by weight of said polymer coating.

28. **(Currently Amended)** Carrier comprised of a core, a polymer coating, and wherein said coating contains a mixture of a polyaniline and carbon black particles, and wherein said mixture is formed by the in situ polymerization of said polyaniline on the surface of said carbon black particles, and wherein said polyaniline is present in an amount of from about 0.1 to below about 5 percent by weight of said polymer coating.

29. **(Original)** A carrier in accordance with claim 1 wherein said coating contains a mixture of said polypyrrole and said polyaniline.

30. **(Currently Amended)** Carrier consisting essentially of a core and a polymer coating, and

\_\_\_\_\_ wherein said coating contains a conductive ~~polypyrrole-polymer~~ contained in a carbon black matrix; ~~or~~ and a polyaniline contained in a carbon black matrix, and wherein said conductive polypyrrole is formed by the in situ polymerization of said pyrrole polypyrrole onto said carbon black surface matrix, and wherein said polyaniline is formed by the in situ polymerization of said polyaniline onto said carbon black surface matrix, and wherein said polypyrrole is present in an amount of from about 0.1 to below about 5 percent by weight of said polymer coating, and wherein said polyaniline is present in an amount of from about 0.1 to below about 5 percent by weight of said polymer coating.

31. **(Currently Amended)** Carrier comprised of a core, and a polymer coating, and

\_\_\_\_\_ wherein said polymer coating contains a conductive polymer ~~polypyrrole~~ contained in a carbon black matrix; ~~or a polyaniline contained in a carbon black matrix, and~~

\_\_\_\_\_ wherein said conductive ~~polypyrrole-polymer~~ is formed by the in situ polymerization of said ~~pyrrole~~ conductive polymer onto said carbon black surface matrix;

~~, and wherein said polyaniline is formed by the in situ polymerization of said polyaniline onto said carbon black surface matrix, \_\_\_\_\_ and wherein said coating contains a said conductive polymer ~~polypyrrole~~ or conductive polyaniline with~~ has a weight average molecular weight Mw of from about 10,000 to about 400,000 or, ~~or possesses a weight average molecular weight of from about 20,000 to about 100,000;~~

\_\_\_\_\_, ~~and wherein the ratio of said polypyrrole said polyaniline carbon black to said polymer coating is from about 1/99 to about 5/95, and wherein said polypyrrole is present in an amount of from about 0.1 to about 5 percent by weight of said polymer coating, and wherein said polyaniline~~ conductive polymer is present in an amount of from about 0.1 to below about 5 percent by weight of said polymer coating; and

\_\_\_\_\_ wherein said conductive polymer is selected from the group consisting of polyaniline and polypyrrole.